

The Pending Claims

1. (Previously Presented) A process kit for a vacuum processing chamber, the vacuum processing chamber comprising a chamber body defining an interior processing region, the process kit comprising:

- a pumping liner configured to be placed within the processing region of the processing chamber, the pumping liner comprising a circumferential body having an upper surface and a lower surface, wherein the body has a plurality of pumping holes disposed along the body;

- a C-channel liner configured to be placed along an outer diameter of the pumping liner, the C-channel liner comprising:

- a circumferential body portion having an upper surface and lower surface,

- a circumferential upper arm disposed proximate the upper surface of the body portion of the C-channel liner,

- a lower arm disposed around a selected radial portion of the body portion of the C-channel liner, the lower arm disposed along the bottom surface of the body portion of the C-channel liner, and

- a channel portion in the C-channel liner defined between the body portion of the C-channel liner, the upper arm, the lower arm, and an outer diameter of the pumping liner, wherein the C-channel liner has a pumping port liner opening;

- a middle liner configured to reside below the pumping liner and the C-channel liner; and

- a lower liner configured to reside below the middle liner;

- wherein an upper interlocking feature is formed between the upper surface of the pumping liner and the upper arm of the C-channel liner;

- wherein a lower interlocking feature is formed between the lower surface of the pumping liner and the lower arm of the C-channel liner; and

- wherein the upper and lower interlocking features inhibit parasitic pumping within the processing region.

2. (Original) The process kit of claim 1, wherein the pumping liner is configured to rest on the C-channel liner.

3. (Original) The process kit of claim 1, wherein the upper interlocking feature comprises:

- a shoulder circumferentially placed along the upper surface of the pumping liner body; and

- an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner body.

4. (Original) The process kit of claim 1, wherein the lower interlocking feature comprises:

- a lower lip disposed along a radial portion of the lower surface of the pumping liner body; and

- a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the pumping liner.

5. (Previously Presented) A process kit for a vacuum processing chamber, the vacuum processing chamber comprising a chamber body defining an interior processing region, the process kit comprising:

- a pumping liner configured to be placed within the processing region of the processing chamber, the pumping liner comprising:

- a circumferential body, wherein the circumferential body has a plurality of pumping holes disposed along the circumferential body,

- a shoulder circumferentially placed along an upper surface of the pumping liner body, and

- a lower lip disposed along a radial portion of a lower surface of the pumping liner body;

- a C-channel liner configured to be placed along an outer diameter of the pumping liner body within the processing region of the processing chamber, the C-channel liner comprising:

a circumferential body,
an upper arm,
a lower arm,
a channel portion defined by the upper arm, the lower arm, the body of the C-channel liner, and the body of the pumping liner,
an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner body, and
a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the pumping liner and to also provide a pumping port liner opening;
a middle liner configured to reside below the pumping liner and the C-channel liner; and
a lower liner configured to reside below the middle liner.

6-7. (Canceled)

8. (Original) The vacuum processing chamber of claim 5, wherein the vacuum processing chamber further comprises a pumping port liner in fluid communication with the pumping port liner opening of the C-channel liner.

9. (Previously Presented) A vacuum processing chamber for processing a substrate, the vacuum processing chamber comprising a chamber body defining an interior processing region, and a process kit disposed within the processing chamber, the process kit comprising:

a pumping liner configured to be placed within the processing region of the processing chamber, the pumping liner comprising:

a circumferential body, wherein the circumferential body has a plurality of pumping holes disposed along the circumferential body,

a shoulder circumferentially placed along an upper surface of the pumping liner body, and

a lower lip disposed along a radial portion of a lower surface of the pumping liner body;

a C-channel liner configured to be placed along an outer diameter of the pumping liner body within the processing region of the processing chamber, the C-channel liner comprising:

a circumferential body,

an upper arm,

a lower arm,

a channel portion defined by the upper arm, the lower arm, the body of the C-channel liner, and the body of the pumping liner,

an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner, and

a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the pumping liner and to also provide a pumping port liner opening;

a middle liner configured to reside below the pumping liner and the C-channel liner; and

a lower liner configured to reside below the middle liner.

10. (Original) The vacuum processing chamber of claim 9, further comprising:

a pumping port liner in fluid communication with the pumping port liner opening of the C-channel liner.

11. (Original) The vacuum processing chamber of claim 10, further comprising:

a seal member providing a seal between

an interface of the C-channel liner with the pumping port liner, and

an interface of the pumping liner with the pumping port liner.

12. (Previously Presented) The vacuum processing chamber of claim 11, wherein the seal member has at least an outer surface fabricated from a material selected from the group consisting of a polished aluminum, a polymer coating, ceramics, and quartz.

13. (Previously Presented) A tandem vacuum processing chamber for processing a substrate, the tandem vacuum processing chamber comprising:

- a chamber body having a pair of interior processing regions provided within the chamber body, the interior processing regions being in fluid communication with one another; and

- a process kit disposed within each of the interior processing regions, each process kit comprising:

- a pumping liner configured to be placed within the respective processing region, the pumping liner comprising:

- a circumferential body, wherein the circumferential body has a plurality of pumping holes disposed along the circumferential body,

- a shoulder circumferentially placed along an upper surface of the pumping liner body, and

- a lower lip disposed along a radial portion of a lower surface of the pumping liner body;

- a C-channel liner configured to be placed along an outer diameter of the pumping liner body within the processing region, the C-channel liner comprising:

- a circumferential body,

- an upper arm,

- a lower arm,

- a channel portion defined by the upper arm, the lower arm, the body of the C-channel liner, and the body of the pumping liner,

- an upper lip circumferentially disposed along the upper arm, the upper lip of the C-channel liner configured to interlock with the shoulder of the pumping liner, and

a lower shoulder along a radial portion of the lower arm, the lower shoulder of the C-channel liner configured to interlock with the lower lip of the pumping liner and to also provide a pumping port liner opening;
a middle liner configured to reside below the pumping liner and the C-channel liner; and
a lower liner configured to reside below the middle liner;
a pair of upper pumping port liners, each upper pumping port liner being in fluid communication with a respective pumping port liner opening.

14. (Original) The tandem vacuum processing chamber of claim 13, wherein the interior processing regions are maintained in fluid communication with one another through a pressure equalization port liner.

15. (Previously Presented) The tandem vacuum processing chamber of claim 14, wherein at least an outer surface of the pressure equalization port liner is fabricated from a smooth material selected from the group consisting of a polished aluminum, a polymer coating, ceramics, and quartz.

16. (Previously Presented) The process kit of claim 1, further comprising a gas distribution plate.

17. (Previously Presented) The process kit of claim 5, further comprising a gas distribution plate.

18. (Previously Presented) The vacuum processing chamber of claim 9, further comprising a gas distribution plate.

19. (Previously Presented) The tandem vacuum processing chamber of claim 13, further comprising a gas distribution plate.

20. (Previously Presented) The process kit of claim 1, further comprising:

a seal member providing a seal between an interface of the C-channel liner with the pumping port liner.

21. (Previously Presented) The process kit of claim 5, further comprising:

a seal member providing a seal between an interface of the C-channel liner with the pumping port liner.

22. (Previously Presented) The tandem vacuum processing chamber of claim 13, further comprising:

a seal member providing a seal between an interface of the C-channel liner with the pumping port liner.